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Docket No. 87355.1622
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES
APPEAL BRIEF FOR THE APPELLANTS

Ex parte Liebl et al.

Applicant: Liebl et al.)
Serial No. 09/944108) Art Unit: 2672
Filed: September 04, 2001) Examiner: Motilewa Good Johnson
For: DATA MONITORING AND DISPLAY METHOD AND APPARATUS

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Commissioner for Patents
P.O. Box 1450
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AUG 16 2004

Technology Center 2600

Sir:

Submitted herewith are three copies (3) of an Appeal Brief and a check for the official fee for the Appeal Brief, in the amount of Three Hundred and Thirty Dollars (\$330.00). The brief is due September 27, 2004. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036.

Respectfully submitted,

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Serial No. 09/944,108) Art Unit: 2672
Filed: September 04, 2001) Examiner: Motilewa Good Johnson

For: DATA MONITORING AND DISPLAY METHOD AND APPARATUS

BRIEF ON APPEAL

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I. INTRODUCTION

This is an appeal from the final Office Action dated January 27, 2004. A Notice of Appeal was filed on July 27, 2004 with a three month extension of time.

II. REAL PARTY IN INTEREST

The Real Party in Interest in the present application is SPX Corporation by way of an assignment.

III. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the appellants, appellants' representatives or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

IV. STATUS OF THE CLAIMS

Claims 1 and 3-22 are pending in the application. Claim 1 is an independent claim upon which claims 3-11 ultimately depend. Claim 12 is an independent claim upon which claims 13-16 and 22 ultimately depend. Claim 17 is an independent claim upon which claims 18-20 ultimately depend. Claim 21 is an independent claim. Claims 1 and 3-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gurne, et al. (U.S. Patent No. 6,181,992 B1). The claims on appeal, Claims 1 and 3-22, are set forth in the attached Appendix 1.

V. STATUS OF THE AMENDMENTS

The Amendment submitted on August 29, 2003 was entered canceling claim 2, amending claims 1, 3, 12, 17 and 18, and adding claims 21-22. In response to this amendment, a final Office Action dated January 27, 2004 was issued finally rejecting claims 1 and 3-22 under 35 U.S.C. §103(a) as being unpatentable over Gurne et al. (U.S. Patent No. 6,181,992 B1). In response to the final Office Action, a Request for Reconsideration was filed on February 13, 2004. An Advisory Action dated June 1, 2004 was issued. A Notice of Appeal was filed on July 17, 2004.

VI. SUMMARY OF THE INVENTION

A. Related Art Problems Overcome by the Invention

In the conventional art plural streams of data may be provided to a computerized analyzer via plural data channels. Yet, there are times when a technician may desire to focus on only one or a relatively small number of data channels at a time. Aside from focusing on a relatively small number of selected data channels at a time, the technician may have a preferred order for

displaying information from the selected data channels. Such preferred order for displaying information may relate to a logical sequence of parameters under study. Moreover, the technician may wish to easily change the order for displaying information from the selected data channels. Additionally, when a two-dimensional graph is displayed, often the graph has a horizontal axis and a vertical axis. Often the horizontal axis depicts measurements of time, and the vertical axis depicts measurements of a parameter that changes over the course of time. For a given graph, a single scale of time on the horizontal axis is generally selected. However, it has been realized by the present inventors that it would be desirable to be able to have a graphical display in which the time scale can be changed for a portion of the horizontal axis.

In order to alleviate the problems of the prior art, the invention of the present application provides a computerized analyzer which permits a technician to focus on one or a smaller number of data channels at a time. The analyzer permits a technician to readily change the order of information displayed for selected data channels. The invention of the present application also provides a graphical display in which the time scale can be changed for a portion of the horizontal axis and can further display a graph that has a first portion of the graph, which employs a first time scale, and which has a second portion of the graph, which employs a zoomed-in time scale.

B. Object of the invention

The invention of the present application provides a method, which displays automotive service data on a diagnostic tool. This is accomplished by “displaying a list of performance measurements, descriptions and values... **arranging the order in which said measurement descriptions and values are displayed in said displaying step**” as recited in claim 1 of the

present application. This facilitates a “preferred order for displaying information from the selected data channels” (see page 2, lines 18-19 of the present application).

The invention of the present application additionally provides an apparatus, which displays automotive service data. This is accomplished by “a display screen... a selection switch for selecting a data item displayed on said display screen... a graphics program for generating a **first graphical representation** of said selected data over time, said graphics program further producing a **second graphical representation by varying a time axis of the first graphical representation of said selected data over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation** on said display screen” as recited in claim 12 of the present application. This facilitates an apparatus that provides a hand-held analyzer having the capabilities of a stand alone analyzer for complex data receiving and complex data processing. (see page 29, lines 5-8 of the present application).

The invention of the present application further provides an apparatus, which displays automotive service data. This is accomplished by “a display means for displaying a list of engine performance data... selection means for selecting at least one of said engine performance measurements from said data... graphing means for generating a **first graphical representation** of said selected at least one engine performance measurements over time, said means for graphing further producing a **second graphical representation by varying a time axis of the first graphical representation of said selected at least one engine performance measurements over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation** on said means for displaying” as recited in claim 17 of the present application. This facilitates an apparatus that provides a hand-

held analyzer having the capabilities of a stand alone analyzer for complex data receiving and complex data processing. (see page 29, lines 5-8 of the present application).

The invention of the present application also provides a method, which displays automotive service data on a diagnostic tool. This is accomplished by “displaying a list of performance measurements, descriptions and values... selecting a measurement from said list... displaying a **first graphical representation of said selected measurement over time... producing a second graphical representation by varying a time axis of the first graphical representation of said selected measurement over a portion of said measurement... simultaneously displaying the first graphical representation and the second graphical representation**” as recited in claim 21 of the present application. This facilitates displaying automotive service data on a hand-held analyzer having the capabilities of a stand alone analyzer for complex data receiving and complex data processing. (see page 29, lines 5-8 of the present application).

C. The claimed invention

1. Independent Claim 1

Independent claim 1 pertains to a method of displaying automotive service data on a diagnostic tool. The method includes the steps of displaying a list of performance measurements, descriptions and values (FIGS. 1A, 1B, and 1C together comprise a flowchart depicting the overall data monitoring and analysis method of the invention, see also page 16, line 22 – page 17, line 1 of the present application), scrolling through said list of measurements, descriptions and values, selecting a measurement from said list (FIG. 3 illustrates a screen shot of the visual display device in which selected sensors for data display and graphing are shown in

highlighted (enlarged) alphanumeric characters), displaying a graphical representation of said selected measurement over time (FIG. 1B depicts block 58 for representing a set of executable instructions of an applications program for displaying a list on the visual display device), and arranging the order in which said measurement descriptions and values are displayed in said displaying step (FIG. 1A depicts block 38 which represents a set of executable program instructions for an applications program for processing a previous list into a reordered list, see also page 22, lines 4-10 of the present application).

2. Dependent claims 3-11

Dependent claim 3 is dependent on claim 1 and further includes selecting a font for at least one entry in a list of performance measurements.

Dependent claim 4 is dependent on claim 3 and further defines a selected font which differentiates an entry from the other entries in the list.

Dependent claim 5 is dependent on claim 4 and further defines a selected font as a different color from the other entries in the list.

Dependent claim 6 is dependent on claim 1 and further includes the step of selecting the performance measurement to be displayed in the list from a group of available measurements.

Dependent claim 7 is dependent on claim 6 and further includes the step of receiving performance measurement values from a vehicle onboard computer.

Dependent claim 8 is dependent on claim 1 and further includes the step of varying the time axis of the graphical representation of the selected measurement over a portion of the measurement before displaying the graphical representation.

Dependent claim 9 is dependent on claim 8 and further defines the varying step to include expanding the time axis over a discrete portion of the axis.

Dependent claim 10 is dependent on claim 9 and further defines the performance measurements as engine performance measurements.

Dependent claim 11 is dependent on claim 1 and further includes the step of moving selected performance measurement descriptions and values to the top of the list to arrange the order in which the entries are listed.

3. Independent Claim 12

Independent claim 12 pertains to an apparatus for displaying automotive service data. The apparatus includes a display screen (see FIGS. 2-5), a pair of switches that receive input directing data to scroll up and down on said display screen (see page 22, lines 1-4 of the present application), a selection switch for selecting a data item displayed on said display screen (see page 22, lines 7-8 of the present application), and a graphics program for generating a first graphical representation of said selected data over time (see page 19, lines 15-17 of the present application), said graphics program further producing a second graphical representation (see page 20, lines 12-15 of the present application) by varying a time axis of the first graphical representation of said selected data over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said display screen (FIG. 4 illustrates two graphical window zones, see also page 25, lines 7-10 of the present application).

4. Dependent claims 13-16 and 22

Dependent claim 13 is dependent on claim 12 and further define a pair of switches and a selection switch as sharing a single input button on the apparatus.

Dependent claim 14 is dependent on claim 12 and further defines the display screen as a touch screen.

Dependent claim 15 is dependent on claim 12 and further defines the display screen as an LCD screen.

Dependent claim 16 is dependent on claim 15 and further defines the graphics program to vary the length of the time axis driving different intervals of the performance measurement.

Dependent claim 22 is dependent on claim 12 and further defines the selected data as an engine performance measurement.

5. Independent Claim 17

Independent claim 17 pertains to an apparatus for displaying automotive service data. The apparatus includes display means for displaying a list of engine performance data (see FIGS. 2-5), selection means for selecting at least one of said engine performance measurements from said data to be displayed in a graphical representation (see page 22, lines 7-8 of the present application), and graphing means for generating a first graphical representation of said selected at least one engine performance measurements over time (see page 19, lines 15-17 of the present application), said means for graphing further producing a second graphical representation (see page 20, lines 12-15 of the present application) by varying a time axis of the first graphical representation of said selected at least one engine performance measurements over a portion of said data and simultaneously displaying the first graphical representation and the second

graphical representation on said means for displaying (FIG. 4 illustrates two graphical window zones, see also page 25, lines 7-10 of the present application).

6. Dependent claims 18-20

Dependent claim 18 is dependent on claim 17 and further defines input means for receiving data representative of the performance measurement from a vehicle on board computer.

Dependent claim 19 is dependent on claim 18 and further defines port means for receiving programs for converting data received from the on board computer for display.

Dependent claim 20 is dependent on claim 19 and further defines the port for receiving a flash card.

7. Independent Claim 21

Independent claim 21 pertains to a method of displaying automotive service data on a diagnostic tool. The method includes the steps of displaying a list of performance measurements, descriptions and values (FIGS. 1A, 1B, and 1C together comprise a flowchart depicting the overall data monitoring and analysis method of the invention, see also page 16, line 22 – page 17, line 1 of the present application), scrolling through said list of measurements, descriptions and values, selecting a measurement from said list (FIG. 3 illustrates a screen shot of the visual display device in which selected sensors for data display and graphing are shown in highlighted (enlarged) alphanumeric characters), displaying a graphical representation of said selected measurement over time (FIG. 1B depicts block 58 for representing a set of executable instructions of an applications program for displaying a list on the visual display device),

producing a second graphical representation (see page 20, lines 12-15 of the present application) by varying a time axis of the first graphical representation of said selected measurement over a portion of said measurement, and simultaneously displaying the first graphical representation and the second graphical representation (FIG. 4 illustrates two graphical window zones, see also page 25, lines 7-10 of the present application).

VII. ISSUES

A. Whether claims 1 and 3-22 are obvious in view of Gurne, et al. (U.S. Patent No. 6,181,992 B1) under 35 U.S.C. §103.

VIII. GROUPING OF CLAIMS

Each claim of this patent application is separately patentable, and upon issuance of a patent, will be entitled to a separate presumption of validity under 35 U.S.C. §282.

IX. APPELLANTS' ARGUMENTS

A. Whether claims 1 and 3-22 are unpatentable over Gurne, et al. (U.S. Patent No. 6,181,992 B1).

Claims 1 and 3-22 were rejected under 35 U.S.C. §103 as being unpatentable over Gurne, et al. (U.S. Patent No. 6,181,992 B1). The following is stated in the Office Action:

5. **Claims 1 and 3-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gurne et al.** (Page 2, Section 5 through page 9.) U.S. Patent Number 6,181,992 B1, "Automotive Diagnostic Service Tool with Hand Held Tool and Master Controller", class 701/29.

As per independent claim 1, a method of displaying automotive service data on a diagnostic tool, comprising the steps of: displaying a list of performance measurements, descriptions and values; (Gurne discloses a menu display

providing options and function keys, col. 6, lines 34-40, see also figure 6) scrolling through said list of measurement descriptions and values; (Gurne discloses direction arrow keys to scroll the menu, col. 7, lines 9-10) selecting a measurement from said list; (Gurne discloses a system selection screen to select the vehicle diagnosis option, col. 7, lines 19-26) and displaying a graphical representation of said selected measurement over time. (Gurne discloses displaying graphical information dynamically, see figure 12, col. 16, lines 24-35).

However, it is noted that Gurne fails to disclose arranging the order in which said, measurement description and values a displayed.

Gurne discloses visually describing what steps are to be taken and in what order and the units are designed to user forms of routines and each routine can be thought of as a series of steps, col. 15, lines 28-36.

It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the order of the measurement and values to allow a technician to perform the required action based upon the form of routine steps.

With respect to dependent claim 3, selecting the font for at least one entry in said list of performance measurements. (Gurne discloses allowing a user to define customized templates by selecting parameters a user wishes to display by entering characters to identify the template, col. 10, lines 39-67).

With respect to dependent claim 4, selected font differentiates said entry from the other entries in said list. (Gurne discloses highlighting an item containing characters, to indicate selection of a desired item, col. 7, lines 1-18).

With respect to dependent claim 5, selected font is a different color from the other entries in said list. (Gurne discloses highlighting an item containing characters to select a desired item, col. 7, lines 1-18. It is inherent that highlighting is used to differentiate between characters.)

With respect to dependent claim 6, selecting the performance measurement to be displayed in said list from a group of available measurements. (Gurne discloses a list of selected measurements, figure 6).

With respect to dependent claim 7, receiving said performance measurement values from a vehicle onboard computer. (Gurne discloses using the hand held tool to receive communication information, i.e. measurement values, from vehicle controller systems, col. 5, lines 22-27).

With respect to dependent claim 8, varying the time axis of the graphical representation of said selected measurement over a portion of said measurement before displaying said graphical representation. (Gurne discloses display data graphs and templates that define which variables will be displayed as charts or text, col. 16, lines 35-39).

With respect to dependent claim 9, varying step includes expanding the time axis over a discreet portion of said axis. (Gurne discloses the hand held unit as a data logger and allow the user to select vehicle parameters on a real time basis and further discloses the logging information represents a snapshot or window of information of which the user can freeze in time as well as the parameters around the time of the trigger, col. 11, lines 10-54).

With respect to dependent claim 10, performance measurements are engine performance measurements. (Gurne discloses using the tool in vehicle controller systems such as the engine, col. 6, lines 25-27).

With respect to dependent claim 11, moving selected performance measurement descriptions and values to the top of said list to arrange the order in which the entries are listed. (Gurne discloses allowing a user to enter the customization mode and select from a list of parameters, i.e. performance measurements, that the user wishes to display, col. 10, lines 39-47).

As per independent claim 12, apparatus for displaying automotive service data, comprising: a display screen; (Gurne discloses a display screen, figure 2, element 20) a pair of switches that receive input directing data to scroll up and down on said display screen; (Gurne discloses a toggle up and down button, figure 5, element 68) a selection switch for selecting a data item displayed on said display screen; (Gurne discloses a switch, figure 5, element 70) a graphics program for generating a graphical representation to be displayed on said display screen of said selected data item; (Gurne discloses based upon the user selection the hand held is in a programming mode, col. 10, lines 20-25) and wherein said selected data item is an engine performance measurement. (Gurne discloses using the tool in vehicle controller systems such as the engine, col. 6, lines 25-27).

However, it is noted that Gurne fails to disclose a first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.

Gurne discloses a split window, with a digital multi mode and a suspended operation and allowing the technician to toggle between the operations and further allow the technician to perform different types of reading simultaneously, col. 8, lines 4-44.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying a first and second graphical representation simultaneously because Gurne allows for different types of reading simultaneously and the technician may desire to view the time frame for a different procedure.

With respect to dependent claim 13, pair of switches and selection switch share a single input button on said apparatus. (Gurne discloses functions keys to

perform screen toggle and further discloses the function keys may be configurable through software, col. 6, lines 40-47).

With respect to dependent claim 14, display screen is a touch screen.

However, it is noted that Gurne fails to disclose a touch screen.

Gurne discloses providing function keys and function key describer in the form of an icon.

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the display screen of Gurne as a touch screen, because it is well known in the art that the selection of an icon is performed by input means, which may include touch.

With respect to dependent claim 15, display screen is an LCD screen. (Gurne discloses a LCD display screen, col. 4, lines 1-3).

With respect to dependent claim 16, graphics program can vary the length of the time axis driving different intervals of the performance measurement. (Gurne discloses the hand held unit as a data logger and allow the user to select vehicle parameters on a real time basis and further discloses the logging information represents a snapshot or window of information of which the user can freeze in time as well as the parameters around the time of the trigger, col. 11, lines 10-54).

As per independent claim 17, apparatus for display automotive service data, comprising: display means for displaying a list of engine performance descriptions and measurements; (Gurne discloses a display menu, figure 6) selection means for selecting at least one of said engine performance measurements to be displayed in a graphical representation; (Gurne discloses a system selection screen to select the vehicle diagnosis option, col. 7, lines 19-26) wherein said graphical representation is displayed in the list of engine performance descriptions and measurements. (Gurne discloses using the tool in vehicle controller systems such as the engine, col. 6, lines 25-27).

However, it is noted that Gurne fails to disclose a first graphical representation, and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.

Gurne discloses a split window, with a digital multi mode and a suspended operation and allowing the technician to toggle between the operations and further allow the technician to perform different types of reading simultaneously, col. 8, lines 4-44.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying a first and second graphical representation simultaneously because Gurne allows for different types of reading

simultaneously and the technician may desire to view the time frame for a different procedure.

With respect to dependent claim 18, input means for receiving data representative of said performance measurement from a vehicle on board computer. (Gurne discloses a hand held unit which operates as a digital multi meter in which electrical readings, i.e. measurements, from a vehicle are input to the hand held unit for display, col. 7, lines 53-67).

With respect to dependent claim 19, port means for receiving programs for converting data received from said on board computer for display. (Gurne discloses ports for receiving expansion modules that allow the hand held to communicate with different devices and interpret, i.e. convert, the information, col. 11, lines 55 - col. 12, line 12).

With respect to dependent claim 20, port receives a flash card. (Gurne discloses flashable memory, col. 6, lines 42-55).

As per independent 21, a method of displaying automotive service data . . . comprising the steps of: displaying a list of performance measurements, descriptions and values; (Gurne discloses a menu display providing options and function keys, col. 6, lines 34-40, see also figure 6) scrolling through said list of measurement descriptions and values; (Gurne discloses direction arrow keys to scroll the menu, col. 7, lines 9-10) selecting a measurement from said list; (Gurne discloses a system selection screen to select the vehicle diagnosis option, col. 7, lines 19-26) and displaying a graphical representation of said selected measurement over time. (Gurne discloses displaying graphical information dynamically, see figure 12, col. 16, lines 24-35).

However, it is noted that Gurne fails to disclose a first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.

Gurne discloses a split window, with a digital multi mode and a suspended operation and allowing the technician to toggle between the operations and further allow the technician to perform different types of reading simultaneously, col. 8, lines 4-44.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include displaying a first and second graphical representation simultaneously because Gurne allows for different types of reading simultaneously and the technician may desire to view the time frame for a different procedure.

With respect to dependent claim 22, the selected data is an engine performance measurement. (Gurne discloses using the tool in vehicle controller systems such as the engine, col. 6, lines 25-27).

Gurne, et al. does not teach or suggest the invention as recited in claims 1 and 3-22 of the present application as required under 35 U.S.C. §103. In order to determine obviousness or non-obviousness of patent application claims under 35 U.S.C. § 103, several basic factual inquiries must be made. These factual inquiries are set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 U.S.P.Q. 459, 467 (1996):

Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or non-obviousness of the subject matter is determined.

In rejecting claims under 35 U.S.C. §103, and Examiner bears an initial burden of presenting a *prima facie* case of obviousness. A *prima facie* case of obviousness is established only if the teachings of the prior art would have suggested the claimed subject matter to a person of ordinary skill in the art. If an Examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. See *In re Rijckaert*, 9 F.3d 1531, 28 U.S.P.Q. 2d 1955 (Fed. Cir. 1993). "If examination ... does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to the grant of the patent." *In re Oetiker*, 977 f.2d 1443, 1445-1446, 24 U.S.P.Q. 2d 1443, 1444 (Fed. Cir. 1992).

A *prima facie* case of obviousness has not been made that Gurne, et al. teach or suggest the invention as recited in claim 1 of the present application. The present invention as recited in claim 1 includes a method of displaying automotive service data on a diagnostic tool. The method includes the steps of displaying a list of performance measurements, descriptions and values, scrolling through said list of measurements, descriptions and values, selecting a measurement from said list, displaying a graphical representation of said selected measurement over time, and arranging the order in which said measurement descriptions and values are

displayed in said displaying step. Gurne, et al. does not teach or suggest the invention as recited in claim 1 of the present application as is required in a rejection made under 35 U.S.C. §103.

Gurne, et al. discloses a system and method for diagnosing and isolating problems and for monitoring operating conditions on an automobile. The system includes a hand held unit and master station. In the final Office Action (see page 3, paragraph 2), the Examiner concedes that “Gurne [et al.] fails to disclose arranging the order in which said measurement, description and values are displayed” as claimed by claim 1 of the present application. The Examiner then attempts to rely on the user forms of routines of Gurne, et al., and asserts that each routine “can be thought of as a series of steps.” However, the user forms of routines, to which the Examiner refers, are part of diagnostic routines which can be interpreted by the hand held unit interpreter (as described by Gurne, et al. in column 15, lines 5-36). These routines are all together different than what is claimed by the present application. Claim 1 of the present application recites a displaying step and further, “**arranging** the order in which said measurement, descriptions and values are displayed in said displaying step.” Gurne, et al. merely discloses selecting a diagnostic routine and in no particular order (*e.g.*, column 15, lines 31-36). Gurne, et al. provides no teaching or suggestion of arranging an order of measurements, descriptions and values displayed in a displaying step as recited in claim 1 of the present application. Nevertheless, the Examiner not only concedes that “Gurne [et al.] fails to disclose arranging the order in which said measurement, description and values are displayed” (in the final Office Action) but additionally concludes that “[i]t would have obvious to one of ordinary skill in the art at the time of the invention to arrange the order of the measurement and values to allow a technician to perform the required action based upon the form of routine steps”. The Examiner does not rely on the teaching(s) of an additional reference to cure the deficiencies of Gurne, et al.

Accordingly, it is respectfully submitted that Gurne, et al. does not teach or suggest “arranging the order in which said measurement, descriptions and values are displayed in said displaying step” as required under 35 U.S.C. §103.

Claim 3 is dependent on claim 1 and further includes selecting the font for at least one entry in a list of performance measurements. Claim 4 is dependent on claim 3 and further defines a selected font which differentiates the entry from the other entries in the list. Claim 5 is dependent on claim 4 and further defines the selected font as a different color from the other entries in the list. Claim 6 is dependent on claim 1 and further includes the step of selecting the performance measurement to be displayed in the list from a group of available measurements. Claim 7 is dependent on claim 6 and further includes the step of receiving the performance measurement values from a vehicle onboard computer. Claim 8 is dependent on claim 1 and further includes the step of varying the time axis of the graphical representation of the selected measurement over a portion of the measurement before displaying the graphical representation. Claim 9 is dependent on claim 8 and further defines the varying step to include expanding the time axis over a discrete portion of the axis. Claim 10 is dependent on claim 9 and further defines the performance measurements as engine performance measurements. Claim 11 is dependent on claim 1 and further includes the step of moving selected performance measurement descriptions and values to the top of the list to arrange the order in which the entries are listed. Each of the dependent claims 3-11 recite additional features upon the subject matter of claim 1, thereby rendering each of these claims separately patentable such that they stand and fall alone, and do not stand and fall with claim 1.

A *prima facie* case of obviousness has not been made that Gurne, et al. teach or suggest the invention as recited in claim 12 of the present application. The present invention as recited in

claim 12 includes an apparatus for displaying automotive service data. The apparatus includes a display screen, a pair of switches that receive input directing data to scroll up and down on said display screen, a selection switch for selecting a data item displayed on said display screen, and a graphics program for generating a first graphical representation of said selected data over time, said graphics program further producing a second graphical representation by varying a time axis of the first graphical representation of said selected data over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said display screen. Gurne et al. does not teach or suggest the invention as recited in claim 12 of the present application as is required in a rejection made under 35 U.S.C. §103.

The Examiner concedes in the final Office Action that Gurne, et al. “fails to disclose a first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.” Next, the Examiner denotes Gurne, et al. as disclosing a split window with a digital multimode in a suspended operation of the look window display on the scan tool (see column 8, lines 4-44). A technician may perform one of a variety of operations, including, for instance, performing an electrical reading, performing a voltage differential test, measuring a voltage drop, and/or measuring electrical characteristics of devices. However, there is no teaching or suggestion of “a graphics program for generating a first graphical representation of said selected data over time, said graphics program further producing a second graphical representation by varying a time axis of the first graphical representation of said selected over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said display screen” as recited in claim 12 of the present invention. Furthermore, the Examiner fails

to rely upon another reference to cure the deficiencies of Gurne, et al. Accordingly, it is respectfully submitted that Gurne, et al. does not teach or suggest “a graphics program for generating a first graphical representation of said selected data over time, said graphics program further producing a second graphical representation by varying a time axis of the first graphical representation of said selected over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said display screen” as required under 35 U.S.C. §103.

Claim 13 is dependent on claim 12 and further define a pair of switches and a selection switch as sharing a single input button on said apparatus. Claim 14 is dependent on claim 12 and further defines a display screen as a touch screen. Claim 15 is dependent on claim 12 and further defines a display screen as an LCD screen. Claim 16 is dependent on claim 15 and further defines a graphics program to vary the length of the time axis driving different intervals of the performance measurement. Claim 22 is dependent on claim 12 and further defines a selected data as an engine performance measurement. Each of the dependent claims 13-16 and 22 recite additional features upon the subject matter of claim 12, thereby rendering each of these claims separately patentable such that they stand and fall alone, and do not stand and fall with claim 12.

A *prima facie* case of obviousness has not been made in that Gurne, et al. teach or suggest the invention as recited in claim 17 of the present application. The present invention as recited in claim 17 includes an apparatus for displaying automotive service data. The apparatus includes display means for displaying a list of engine performance data, selection means for selecting at least one of said engine performance measurements from said data to be displayed in a graphical representation, and graphing means for generating a first graphical representation of said selected at least one engine performance measurements over time, said means for graphing

further producing a second graphical representation by varying a time axis of the first graphical representation of said selected at least one engine performance measurements over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said means for displaying. Gurne, et al. does not teach or suggest the invention as recited in claim 17 of the present application as is required in a rejection made under 35 U.S.C. §103.

The Examiner concedes in the final Office Action that Gurne, et al. fails to disclose a “first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.” Again, the Examiner turns to column 8, lines 4-44 of Gurne, et al. However, the disclosure of Gurne, et al. is silent with regards to showing a time axis variation of the first graphical representation in order to produce a second graphical representation as recited in claim 17 of the present application. The Examiner fails to rely upon another reference to cure the deficiencies of Gurne, et al. Thus, it is respectfully submitted that Gurne, et al. does not teach or suggest a “first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously” as required under 35 U.S.C. §103.

Claim 18 is dependent on claim 17 and further defines input means for receiving data representative of a performance measurement from a vehicle on board computer. Claim 19 is dependent on claim 18 and further defines port means for receiving programs for converting data received from an on board computer for display. Claim 20 is dependent on claim 19 and further defines a port for receiving a flash card. Each of the dependent claims 18-20 recite additional features upon the subject matter of claim 17, thereby rendering each of these claims separately patentable such that they stand and fall alone, and do not stand and fall with claim 17.

A *prima facie* case of obviousness has not been made in that Gurne, et al. teach or suggest the invention as recited in claim 21 of the present application. The present invention as recited in claim 21 includes a method of displaying automotive service data on a diagnostic tool. The method includes the steps of displaying a list of performance measurements, descriptions and values, scrolling through said list of measurements, descriptions and values, selecting a measurement from said list, displaying a graphical representation of said selected measurement over time, producing a second graphical representation by varying a time axis of the first graphical representation of said selected measurement over a portion of said measurement, and simultaneously displaying the first graphical representation and the second graphical representation. Gurne, et al. does not teach or suggest the invention as recited in claim 17 of the present application as is required in a rejection made under 35 U.S.C. §103.

The Examiner concedes in the final Office Action that Gurne, et al. “fails to disclose a first graphical representation and a second graphical representation by varying a time axis of the first graphical representation and displaying both simultaneously.” Again, the Examiner turns to Gurne, et al. column 8, lines 4-44. However, Gurne, et al. fails to teach producing a second graphical representation by varying a time axis of the first graphical representation and displaying the first graphical representation and a second graphical representation simultaneously as recited in claim 21. The Examiner fails to rely upon another reference to cure the deficiencies of Gurne, et al. Thus, it is respectfully submitted that Gurne, et al. does not teach or suggest a “producing a second graphical representation by varying a time axis of the first graphical representation and displaying the first graphical representation and a second graphical representation simultaneously” as required under 35 U.S.C. §103.

X. CONCLUSION

For all of the above-noted reasons, it is strongly contended that certain, clear and important distinctions exist between the present invention as recited in claims 1 and 3-22 and the cited references as provided in the Office Action. It is further contended that these distinctions are more than sufficient to render the claimed invention unobvious to a person of ordinary skill in the art at the time the invention was made.

This final rejection being in error, therefore, it is respectfully requested that this Honorable Board of Patent Appeals and Interferences reverse the Examiner's decision in this case, and indicate the allowability of claims 1 and 3-22.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fee deficiencies or credit any overpayments to Deposit Account No. 50-2036.

Respectfully submitted,

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APPENDIX 1

1. (Currently Amended) A method of displaying automotive service data on a diagnostic tool, comprising the steps of:
 - displaying a list of performance measurements, descriptions and values;
 - scrolling through said list of measurements, descriptions and values;
 - selecting a measurement from said list;
 - displaying a graphical representation of said selected measurement over time; and
 - arranging the order in which said measurement descriptions and values are displayed in said displaying step.
2. (Canceled)
3. (Currently Amended) The method of claim 1 further comprising the step of selecting the font for at least one entry in said list of performance measurements.
4. (Original) The method of claim 3 wherein said selected font differentiates said entry from the other entries in said list.
5. (Original) The method of claim 4 wherein said selected font is a different color from the other entries in said list.
6. (Original) The method of claim 1 further comprising the step of selecting the performance measurement to be displayed in said list from a group of available measurements.

7. (Original) The method of claim 6 further comprising the step of receiving said performance measurement values from a vehicle onboard computer.
8. (Original) The method of claim 1 further comprising the step of varying the time axis of the graphical representation of said selected measurement over a portion of said measurement before displaying said graphical representation.
9. (Original) The method of claim 8 wherein said varying step includes expanding the time axis over a discrete portion of said axis.
10. (Original) The method of claim 9 wherein said performance measurements are engine performance measurements.
11. (Original) The method of claim 1 further comprising the step of moving selected performance measurement descriptions and values to the top of said list to arrange the order in which the entries are listed.
12. (Currently Amended) Apparatus for displaying automotive service data, comprising:
 - a display screen;
 - a pair of switches that receive input directing data to scroll up and down on said display screen;
 - a selection switch for selecting a data item displayed on said display screen; and

a graphics program for generating a first graphical representation of said selected data over time, said graphics program further producing a second graphical representation by varying a time axis of the first graphical representation of said selected data over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said display screen.

13. (Original) The apparatus of claim 12 wherein said pair of switches and said selection switch share a single input button on said apparatus.

14. (Original) The apparatus of claim 12 wherein said display screen is a touch screen.

15. (Original) The apparatus of claim 12 wherein said display screen is an LCD screen.

16. (Original) The apparatus of claim 15 wherein said graphics program can vary the length of the time axis driving different intervals of the performance measurement.

17. (Currently Amended) Apparatus for displaying automotive service data, comprising:
display means for displaying a list of engine performance data;

selection means for selecting at least one of said engine performance measurements from said data to be displayed in a graphical representation; and

graphing means for generating a first graphical representation of said selected at least one engine performance measurements over time, said means for graphing further producing a second graphical representation by varying a time axis of the first graphical representation of

said selected at least one engine performance measurements over a portion of said data and simultaneously displaying the first graphical representation and the second graphical representation on said means for displaying.

18. (Currently Amended) The apparatus of claim 17, further comprising input means for receiving data representative of said performance measurement from a vehicle on board computer.

19. (Original) The apparatus of claim 18 further comprising port means for receiving programs for converting data received from said on board computer for display.

20. (Original) The apparatus of claim 19 wherein said port receives a flash card.

21. (New) A method of displaying automotive service data on a diagnostic tool, comprising the steps of:

displaying a list of performance measurements, descriptions and values;
scrolling through said list of measurements descriptions and values;
selecting a measurement from said list;
displaying a first graphical representation of said selected measurement over time;
producing a second graphical representation by varying a time axis of the first graphical representation of said selected measurement over a portion of said measurement; and
simultaneously displaying the first graphical representation and the second graphical representation.

22. (New) The apparatus of claim 12 wherein said selected data is an engine performance measurement.

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